

SAE International Offers New Update to Best-selling Racecar Data Acquisition Book

SAE International's new book "Analysis Techniques for Racecar Data Acquisition," offers techniques for analyzing data recorded by any vehicle's data acquisition system.

Warrendale, PA (<u>PRWEB</u>) January 14, 2014 -- Racecar data acquisition used to be limited to well-funded teams in high-profile championships. Today, the cost of electronics has decreased dramatically, making them available to everyone. SAE International's new book "<u>Analysis Techniques for Racecar Data Acquisition</u>," offers techniques for analyzing data recorded by any vehicle's data acquisition system.

Whether measuring the performance of a Formula One racecar or that of a road-legal street car on the local drag strip, the dynamics of vehicles and their drivers remain the same. Identical analysis techniques apply. Some race series have restricted data logging to decrease the team's running budgets. In these cases it is extremely important that a maximum of information is extracted and interpreted from the hardware at hand. A team that uses data more efficiently will have an edge over the competition. However, the ever-decreasing cost of electronics makes advanced sensors and logging capabilities more accessible for everybody. With this comes the risk of information overload. Techniques are needed to help draw the right conclusions quickly from very large data sets.

This book details how to measure the performance of the vehicle and driver, what can be learned from it, and how this information can be used to advantage next time the vehicle hits the track. Such information is invaluable to racing engineers and managers, race teams, and racing data analysts in all motorsports.

In addition to updates throughout, this new edition contains three new chapters: one on techniques for analyzing tire performance, one that provides an introduction to metric-driven analysis, a technique that is used throughout the book, and another that explains what kind of information the data contains about the track.

Chapters include:

- Data Analysis Software Requirements
- The Basics
- Acceleration
- Braking
- Gearing
- Cornering



- Understanding Tire Performance
- Quantifying Roll Stiffness Distribution
- Wheel Loads and Load Transfer
- Shock Absorbers
- Suspension Analysis in the Frequency Domain
- Aerodynamics
- Analyzing the Driver
- Simulation Tools
- Using the Data Acquisition System for Race Tactics
- Data Analysis Using Metrics
- Track Data
- An Introduction to Measurement

"Analysis Techniques for Racecar Data Acquisition," is authored by Jorge Segers.

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For more information, including free front and back matter, or to order "Analysis Techniques for Racecar Data Acquisition," visit: <u>http://books.sae.org/r-408/</u>.

To request an electronic review copy of the book, email pr(at)sae(dot)org. Forward published reviews to Shawn Andreassi at pr(at)sae(dot)org or SAE International, 400 Commonwealth Dr., Warrendale PA, 15096-0001, to receive a print copy of the book or another equivalent SAE International book.

<u>SAE International</u>is a global association committed to being the ultimate knowledge source for the engineering profession. By uniting over 138,000 engineers and technical experts, we drive knowledge and expertise across a broad spectrum of industries. We act on two priorities: encouraging a lifetime of learning for mobility engineering professionals and setting the standards for industry engineering. We strive for a better world through the work of our charitable arm, the SAE Foundation, which helps fund programs like A World in Motion® and the Collegiate Design SeriesTM.

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